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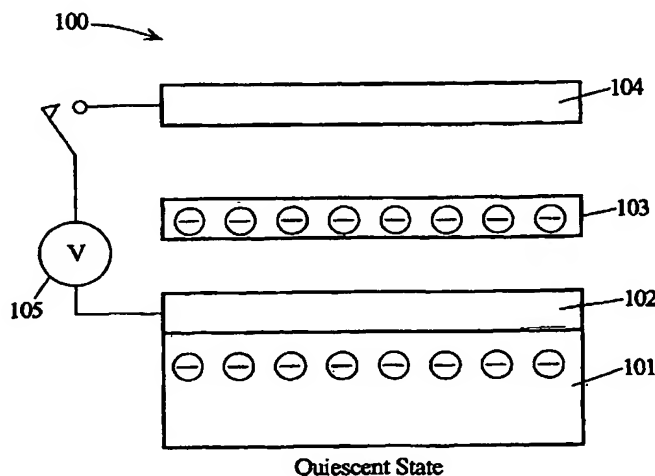
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(54) Title: **DOUBLE-ELECTRET MEMS ACTUATOR**



(57) Abstract: An actuator (100) taking advantage of ponderomotive forces to enhance its electromechanical performance as a function of input energy. An actuator (100) may include a first conductive layer (102) residing on a first electret layer (101). The actuator (100) may further include a moveable second electret layer (103) which is spaced apart in relation to the first conductive layer (102) when the second electret layer (103) is in a quiescent state. The actuator (100) may further include a second conductive layer (104) in a spaced apart relation to the second electret layer (103) when the second electret layer (103) is in the quiescent state. The actuator (100) may further include a voltage source (105) configured to selectively apply a voltage between the first (102) and second (104) conductive layers thereby propelling the second electret layer (103) to either the first (102) or second (104) conductive layer.